

# The management of replacement ewe and ram lambs for breeding in Iceland

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# Sheep production in Iceland

- Native, North-European short-tailed breed, 480.000 winterfed.
- Hardy, seasonal breeding in December
  - for lambing in May, 1.7-2.0 lambs per ewe.
- Ewes weigh 60-70 kg, rams 90-100 kg.
- Great genetic diversity; horned/polled,
  - white/coloured.
- Economic value: lamb 90%, wool, skins, milk 10%.



# Rangeland grazing from June to September



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# Lambs in September



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# Lambs in September



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# Ram lamb in September



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..... housing and indoor feeding in winter



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..... housing and indoor feeding in winter



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# Ewe lambs

- Separated from adult sheep in late October.
- Are generally mated at 7 months of age after shearing in November at 6 months.
- Lower reproductive performance than in ewes but variable in both conception and lambing rates.



Ewe lamb (5 months) in early October



Ewe lambs (11 months) in April



# Ram lambs

- Also separated from adult sheep in late October.
- Also shorn at 6 months of age in November
- Normally mated to 25-35 ewes and/or ewe lambs in pens in December when 7 months.
- Ram lambs are not included in the national AI Services.



# Management of ewe lambs

- Positive effects of autumn shearing on reproductive performance.
- Maintain sufficiently high temperature in the sheep house, allow for increased feed intake after shearing.
- Aim for continuous and steady body growth, without nutritional flushing before mating.
- Mainly fed high dry matter bale silage, sometimes supplemented with high quality protein, mainly fish meal.
- One ram lamb or an older ram allocated to each ewe lamb pen. Polled rather than horned rams may be preferred.
- No hormonal treatments and AI not practiced in ewe lamb breeding.

# Management of ram lambs

- Autumn shearing and feeding – same as for ewe lambs.
- Positive effects of shearing on mating dexterity and copulation success.
- When turned into a pen with ewe lambs/ewes, ensure that the ram lamb is able to mate successfully.
- There is no evidence of differences between ram lambs and older rams in conception and lambing rates of ewe lambs and ewes.

# Subfertility in Icelandic ewe lambs

- Disappointing conception rates ( $< 75\%$ ) occur sporadically in mated ewe lambs – in some flocks, in some years.
- In these cases pregnancy diagnosis at days 70-90 has revealed a relatively high frequency of dead or dying foetuses.
- Studies have not revealed any causes, such as due to pathogenic agents or Selenium deficiency.
- Speculations on this presumed early embryonic mortality:
  - some unknown abortion agent?
  - intensive feeding/high growth rate conflicting with pregnancy maintenance?
  - deficiencies in placental growth and the partition of nutrients?



# Conclusions

- Ewe lamb breeding is generally practiced as a means of enhancing economic efficiency of sheep flocks in Iceland.
- Further research is needed into sporadic subfertility attributed to foetal losses in early pregnancy.
- Ram lambs are normally used successfully for mating with both ewe lambs and ewes.
- Farmers are advised to increase the use of ram lambs for mating, even for most of the ewes and all the ewe lambs, to speed up the rate of genetic improvement in their flocks.



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**Thank you!**



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